

## CLAIMS

[1] A soft magnetic material used to make powder magnetic cores comprising:  
a plurality of composite magnetic particles (30) formed from a metal  
5 magnetic particle (10) and an insulative coating (20) surrounding a surface of  
said metal magnetic particle (10) and containing metallic salt phosphate  
and/or oxide; and  
a lubricant formed as fine particles added at a proportion of at least  
0.001 percent by mass and no more than 0.1 percent by mass relative to said  
10 plurality of composite magnetic particles (30).

[2] A soft magnetic material according to claim 1 wherein said lubricant  
formed as fine particles has a mean particle diameter of no more than 2.0  
microns.

[3] A soft magnetic material according to claim 1 wherein said lubricant  
15 formed as fine particles includes a metallic soap and/or an inorganic lubricant  
with a hexagonal crystal structure.

[4] A soft magnetic material according to claim 1 wherein a proportion of said  
lubricant formed as fine particles relative to said plurality of composite  
magnetic particles (30) is at least 0.001 percent by mass and no more than  
20 0.025 percent by mass.

[5] A soft magnetic material according to claim 1 further comprising a  
thermoplastic resin interposed between said plurality of composite magnetic  
particles (30) at a proportion of at least 0.001 percent by mass and no more

than 0.1 percent by mass relative to said plurality of composite magnetic particles (30).

[6] A powder magnetic core made using a soft magnetic material according to claim 1.

5 [7] A powder magnetic core according to claim 6 wherein a fill rate (density) is at least 95 percent.